

**What is invention claimed is:**

1. A cooling apparatus comprising:
  - a housing, said housing having a receiving open chamber extending to a front side thereof;
  - 5 an axial flow fan transversely mounted in the receiving open chamber inside said housing, said axial flow fan comprising a shaft connected to a drive means, and a vane wheel mounted on said shaft, said vane wheel having a plurality of vanes around the periphery thereof;
  - 10 a display panel mounted on the front side of said housing, said display panel having an LED display unit; and a control circuit assembly coupled to said axial flow fan and said LED display unit, and adapted to detect a temperature of a heat source, to compare a detected temperature level with a reference signal, to drive said axial flow fan subject to a comparison result, and also to drive said LED display unit to indicate the detected temperature level.
  - 15 2. The cooling apparatus as claimed in claim 1, further comprising a thin sheet air filter mounted in said display panel, a packing frame fastened to said display panel to hold down said thin sheet air filter, said packing frame defining an opening, and a grille mounted in the opening of said packing frame.
  - 20 3. The cooling apparatus as claimed in claim 1, wherein

said LED display unit comprises an LED display, and light emitting elements for °C, °F, Hi, Lo indications.

4. The cooling apparatus as claimed in claim 1, wherein said display panel has an opening corresponding to the receiving 5 open chamber of said housing.

5. The cooling apparatus as claimed in claim 1, wherein said display panel comprises a Fahrenheit/Celsius selector switch adapted to select a Fahrenheit/Celsius temperature display mode of said LED display unit.

10 6. The cooling apparatus as claimed in claim 1, wherein said control circuit assembly comprises:

a pulse wave reference circuit;  
a temperature detection circuit adapted to detect the temperature of a heat source;

15 a Fahrenheit/Celsius detection circuit;

a driving circuit coupled to said axial fan and adapted to drive said axial fan; and

a control circuit respectively coupled to said pulse wave reference circuit, said temperature detection circuit, said

20 Fahrenheit/Celsius detection circuit, said driving circuit, and said LED display unit;

wherein said control circuit compares a potential output from said temperature detection circuit to a potential output from

said pulse wave reference circuit, and then provides a pulse signal to said driving circuit subject to a comparison result, causing said driving circuit to drive said axial flow fan, or to control said LED display unit to show a currently detected Fahrenheit/Celsius  
5 temperature level.

7. A cooling apparatus installed in the computer case of a computer and adapted to dissipate heat from a heat source in said computer case, the cooling apparatus comprising:

a housing, said housing having a receiving open chamber  
10 extending to a front side thereof;

an axial flow fan transversely mounted in the receiving open chamber inside said housing, said axial flow fan comprising a shaft connected to drive means, and a vane wheel mounted on said shaft, said vane wheel having a plurality of vanes around the  
15 periphery thereof;

a display panel mounted on the front side of said housing, said display panel having an LED display unit; and

a control circuit assembly coupled to said axial flow fan and said LED display unit, and adapted to detect a temperature of  
20 said heat source inside said computer case of said computer, to compare a detected temperature level with a reference signal, to drive said axial flow fan subject to a comparison result, and to drive said LED display unit to indicate the detected temperature

level.

8. The cooling apparatus as claimed in claim 7, further comprising a thin sheet air filter mounted in an opening in said display panel corresponding to the receiving open chamber of said 5 housing, a packing frame fastened to said display panel to hold down said thin sheet air filter, said packing frame defining an opening, and a grille mounted in the opening of said packing frame.

9. The cooling apparatus as claimed in claim 7, wherein said LED display unit comprises an LED display, and light emitting 10 elements for °C, °F, Hi, Lo indications.

10. The cooling apparatus as claimed in claim 7, wherein said display panel comprises a Fahrenheit/Celsius selector switch adapted to select a Fahrenheit/Celsius temperature display mode of said LED display unit.

15 11. The cooling apparatus as claimed in claim 7, wherein said control circuit assembly comprises:

    a pulse wave reference circuit;

    a temperature detection circuit adapted to detect a temperature of a heat source;

20     a Fahrenheit/Celsius detection circuit;

    a driving circuit coupled to said axial fan and adapted to drive said axial fan; and

    a control circuit respectively coupled to said pulse wave

reference circuit, said temperature detection circuit, said Fahrenheit/Celsius detection circuit, said driving circuit, and said LED display unit;

wherein said control circuit compares a potential output

- 5 from said temperature detection circuit to a potential output from said pulse wave reference circuit, and then provides a pulse signal to said driving circuit subject to a comparison result, causing said driving circuit to drive said axial flow fan, or to control said LED display unit to show a currently detected Fahrenheit/Celsius
- 10 temperature level.